

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of repairing a Ni-based alloy part having an undercoat layer and a topcoat layer stacked on a Ni-based alloy base when the topcoat layer is damaged, comprising the steps of:

removing a damaged portion of the topcoat layer without removing all of the topcoat layer and removing a denatured portion of the undercoat layer corresponding to the damaged portion;

forming another undercoat layer in a removed portion, where the original undercoat layer has been removed, by spraying; and

forming another topcoat layer formed of ZrO_2 -based ceramics only at a portion where the topcoat layer has been damaged,

wherein said topcoat layer and said another topcoat layer are formed of different ~~material~~ materials, and

wherein said undercoat layer is formed of Co-based MCrAlY, and said another undercoat layer is formed of a Ni-based MCrAlY having oxidation resistance.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The method of repairing a Ni-based alloy part according to claim 1, wherein another topcoat layer is formed in the removed portion of the topcoat layer by an electron beam physical vapor deposition method.

5. (Canceled)

6. (Currently Amended) A method of repairing a Ni-based alloy part having an undercoat layer and a topcoat layer stacked on a Ni-based alloy base when the topcoat layer is damaged, comprising the steps of:

removing a damaged portion of the topcoat layer without removing all of the topcoat layer and removing a denatured portion of the undercoat layer corresponding to the damaged portion;

applying spray to a removed portion, where the undercoat layer has been removed, to form another undercoat layer at reduced pressure, a spray particle speed of less than 300 m/s, and a base-material temperature of 600°C or less; and

forming another topcoat layer formed of ZrO₂-based ceramics only at the damaged portion of the topcoat layer,

wherein said topcoat layer and said another topcoat layer are formed of different ~~material~~ materials, and

wherein said undercoat layer is formed of Co-based MCrAlY, and said another undercoat layer is formed of a Ni-based MCrAlY having oxidation resistance.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The method of repairing a Ni-based alloy part according to claim 6, wherein the another topcoat layer is formed in the removed portion of the topcoat layer by an electron beam physical vapor deposition method.

10. (Currently Amended) The method of repairing a Ni-based alloy part according to claim 1, wherein said topcoat layer is formed of ZrO₂-8Y₂O₃ and said another topcoat layer is

formed of $\text{ZrO}_2\text{-Dy}_2\text{O}_3$ or $\text{ZrO}_2\text{-Yb}_2\text{O}_3$ having ~~excellent~~ oxidation resistance.

11. (Canceled)

12. (Currently Amended) The method of repairing a Ni-based alloy part according to claim 1, wherein said undercoat layer and said another undercoat layer are formed of different ~~material~~ materials.

13. (Canceled)

14. (Canceled)

15. (Currently Amended) The method of repairing a Ni-based alloy part according to claim 6, wherein said undercoat layer and said another undercoat layer are formed of different ~~material~~ materials.

16.-18. (Canceled)

19. (Currently Amended) The method of repairing a Ni-based alloy part according to claim 6, wherein a layer formed of a material having ~~excellent~~ oxidation resistance is used as said another undercoat layer.

20. (Currently Amended) The method of repairing a Ni-based alloy part according to claim 6, wherein said topcoat layer is formed of $\text{ZrO}_2\text{-8Y}_2\text{O}_3$ and said another topcoat layer is formed of $\text{ZrO}_2\text{-Dy}_2\text{O}_3$ or $\text{ZrO}_2\text{-Yb}_2\text{O}_3$ having ~~excellent~~ oxidation resistance.

21. (Currently Amended) A method of repairing a Ni-based alloy part having an undercoat layer and a topcoat layer stacked on a Ni-based alloy base when the topcoat layer is damaged, comprising the steps of:

removing a damaged portion of the topcoat layer without removing all of the topcoat layer and removing denatured portion of the undercoat layer corresponding to the damaged

portion;

applying spray to a removed portion, where the undercoat layer has been removed, to form another undercoat layer in the atmosphere at a spray particle speed of 300 m/s or more and a base-material temperature of 300 °C or less; and

forming another topcoat layer formed of ZrO₂-based ceramics only at a portion where the topcoat layer has been damaged,

wherein said topcoat layer and said another topcoat layer are formed of different ~~material~~ materials, and

wherein said undercoat layer is formed of Co-based MCrAlY, and said another undercoat layer is formed of a Ni-based MCrAlY having oxidation resistance.

22. (Currently Amended) The method of repairing a Ni-based alloy part according to claim 21, wherein a layer formed of a material having ~~excellent~~ oxidation resistance is used as said another undercoat layer.

23. (Previously Presented) The method of repairing a Ni-based alloy part according to claim 21, wherein spraying is applied to the removed portion where the undercoat layer has been removed, followed by forming another topcoat layer in the removed portion of the topcoat layer by an electron beam physical vapor deposition method.

24. (Currently Amended) The method of repairing a Ni-based alloy part according to claim 21, wherein said undercoat layer and said another undercoat layer are formed of different ~~material~~ materials.

25. (Canceled)

26. (Currently Amended) The method of repairing a Ni-based alloy part according to

claim 21, wherein said topcoat layer is formed of $\text{ZrO}_2\text{-}8\text{Y}_2\text{O}_3$ and said another topcoat layer is formed of $\text{ZrO}_2\text{-Dy}_2\text{O}_3$ or $\text{ZrO}_2\text{-Yb}_2\text{O}_3$ having ~~excellent~~ oxidation resistance.

27. (Canceled)

28. (Canceled)

29. (New) A method of repairing a Ni-based alloy part having an undercoat layer and a topcoat layer stacked on a Ni-based alloy base when the topcoat layer is damaged, comprising the steps of:

removing a damaged portion of the topcoat layer without removing all of the topcoat layer and removing a denatured portion of the undercoat layer corresponding to the damaged portion;

applying spray without using slurry by spray gun to a removed portion, where the undercoat layer has been removed, to form another undercoat layer at reduced pressure, a spray particle speed of less than 300 m/s, and a base-material temperature of 600°C or less; and

subsequently without heat treatment, forming another topcoat layer formed of ZrO_2 -based ceramics only at the damaged portion of the topcoat layer,

wherein said topcoat layer and said another topcoat layer are formed of different materials.

30. (New) The method of repairing a Ni-based alloy part according to claim 29, wherein another topcoat layer is formed in the removed portion of the topcoat layer by an electron beam physical vapor deposition method.

31. (New) The method of repairing a Ni-based alloy part according to claim 29,

wherein said topcoat layer is formed of $\text{ZrO}_2\text{-}8\text{Y}_2\text{O}_3$ and said another topcoat layer is formed of $\text{ZrO}_2\text{-Dy}_2\text{O}_3$ or $\text{ZrO}_2\text{-Yb}_2\text{O}_3$ having oxidation resistance.

32. (New) The method of repairing a Ni-based alloy part according to claim 29, wherein said undercoat layer and said another undercoat layer are formed of different materials.

33. (New) The method of repairing a Ni-based alloy part according to claim 29, wherein said undercoat layer is formed of Co-based MCrAlY, and said another undercoat layer is formed of a Ni-based MCrAlY having oxidation resistance.

34. (New) A method of repairing a Ni-based alloy part having an undercoat layer and a topcoat layer stacked on a Ni-based alloy base when the topcoat layer is damaged, comprising the steps of:

removing a damaged portion of the topcoat layer without removing all of the topcoat layer and removing a denatured portion of the undercoat layer corresponding to the damaged portion;

applying spray without using slurry by spray gun to a removed portion, where the undercoat layer has been removed, to form another undercoat layer in an atmosphere at a spray particle speed of 300 m/s or more and a base-material temperature of 300°C or less; and

subsequently without heat treatment forming another topcoat layer formed of ZrO_2 -based ceramics only at a portion where the topcoat layer has been damaged,

wherein said topcoat layer and said another topcoat layer are formed of different materials.

35. (New) The method of repairing a Ni-based alloy part according to claim 34,

wherein a layer formed of a material having oxidation resistance is used as said another undercoat layer.

36. (New) The method of repairing a Ni-based alloy part according to claim 34, wherein spraying is applied to the removed portion where the undercoat layer has been removed, followed by forming another topcoat layer in the removed portion of the topcoat layer by an electron beam physical vapor deposition method.

37. (New) The method of repairing a Ni-based alloy part according to claim 34, wherein said undercoat layer and said another undercoat layer are formed of different materials.